TRENT Technology Refresh For Navy Transformation, Phase I

Status: Pending Transition

PROBLEM / OBJECTIVE

The primary objective of the project is to demonstrate a significant reduction in the operations and support (O&S) costs of Navy weapon systems through the application of a new proactive Technology Refresh (TR) strategy. The goals were to define requirements for, and infrastructure of, a flexible architecture that includes increased system-through-component awareness throughout the supply chain and support groups.

ACCOMPLISHMENTS / PAYOFF

Process Improvement:

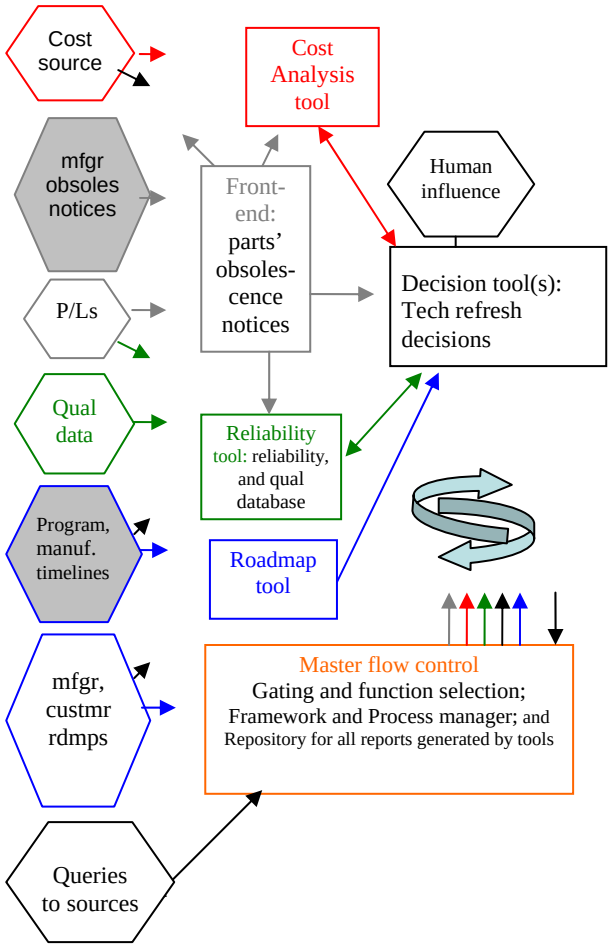
Technology refresh considers all systems' sustainment activities including redesigns, life-time buys, new technology insertions, and replacement of obsolete materials. The tool categories of parts' notification with replacement recommendations, costing, reliability, tech refresh, roadmapping, supply chain and support are included within the TRENT system process and open-architecture framework. The project identified elements of, and workflow for, a best practice in technology management. The approach also included a pilot project for implementation of the initial system; optimal refresh intervals were determined and one re-design cycle's cost avoidance was indicated.

Implementation and Technology Transfer:

Implementation was demonstrated as a pilot initiative February 2005 for the Joint Strike Fighter Program. Phase II is expected to conclude with transition to the Navy in March 2006. As a result of benefit demonstrated during the pilot, the methods of the TRENT project are being implemented into JSF technology management strategies. The prime contractor (Lockheed Martin Aero) has endorsed the TRENT project for the JSF, and is now able to verify obsolescence assessments from suppliers.

Expected Benefits:

- Provides a mechanism for linking emerging COTS technology with defense technologies via integrated product roadmaps
- Business case based on Lockheed Martin trade studies shows potential for >10% cost reduction due to increased visibility alone.
- Allows for reduction of inventory / unnecessary life-time buys
- End to stand-alone software solutions: comprises a process and an open-architecture (software) system framework.



TRENT Block Diagram and pilot program JSF

TIME LINE / MILESTONE

Start Date: February 2004
End Date: March 2005

FUNDING

Total ManTech Investment: $1M
Cost Share: ONR (Office of Naval Research)

PARTICIPANTS

COE EMPF
Advanced Technology Institute (ATI)
The Altarum Institute
Lockheed Martin Advanced Technology Labs (ATL)
Lockheed Martin Aeronautics
Northrop Grumman
Rockwell Collins
Honeywell International, Inc
Boeing IDS